

AMENDMENT TO THE CLAIMS

Claims 1 – 4 (Canceled)

Claim 5 (Currently Amended): A method for in vitro detection of a gene encoding a drug-targeted protein, comprising

linking an antigenic substance to a drug via a chemical cross-linker to form a probe, wherein the drug is non-protein and *per se* exhibits no antigenicity and wherein the antigenic substance is serum albumin or fluorescein isothiocyanate and wherein the chemical cross-linker is selected from the group consisting of glutaraldehyde, hexamethylene diisocyanate, hexamethylene diisothiocyanate, N,N'-poly(methylene)bis(iodoacetamide), N,N'-ethylenebis(maleimide), ethylene glycol bis(succinimidyl) succinate, sulfosuccinimidyl-4-(p-maleimidophenyl) butyrate, and bisdiazobenzidine;

screening for the gene encoding a protein targeted by said drug, wherein said protein is expressed from a cDNA expression library from a human cell, by using an antigen-antibody reaction between the antigenic substance of the probe and a labeled antibody specific for the antigenic substance, wherein said screening comprises contacting a sample containing the proteins obtained from the cDNA expression library with the probe to form a complex between the probe and proteins having a binding affinity for the drug contained in the probe, contacting the complex with a labeled antibody specific for the antigenic substance in the probe, washing the sample to remove any non-bound antibody, and detecting the presence of the labeled antibody which has bound to the antigenic substance; and

determining the gene sequence of the protein expressed from the cDNA expression library within the probe-bound is contained in a phage vector.

Claim 6 (Previously Presented): The method of claim 15, wherein said phage display method employs *Escherichia coli* as a host cell.

Claims 7 – 8 (Canceled)

Claim 9 (Previously Presented): The method of claim 5, wherein the human cell is a human brain cell.

Claim 10 (Previously Presented): The method of claim 5, wherein the human cell is a human placenta cell.

Claim 11 (Previously Presented): The method of claim 16, wherein the membrane is a nitrocellulose membrane.

Claim 12 (Previously Presented): The method of claim 16, wherein the membrane comprises isopropyl- $\beta$ -D-thiogalactoside.

Claim 13 (Canceled)

Claim 14 (Withdrawn): The method of claim 5, wherein the chemical cross-linker is sulfosuccinimidyl-4-(p-maleimidophenyl) butyrate.

Claim 15 (Previously Presented): The method of claim 5, wherein said expressed is by phage display method.

Claim 16 (Previously Presented): The method of claim 15, wherein a membrane is employed to capture phage from plated phage cultures obtained during said phage display method.

SUPPORT FOR THE AMENDMENT

Claims 1- 4, 7, 8, and 13 were previously canceled.

Claim 5 is amended herein.

Support for the amendment to Claim 5 is provided by Claims 1-4 and the specification as originally filed, for example at page 5, lines 1-5.

No new matter has been entered by the present amendments.